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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,076	02/16/2001	Sebastien Corbeil	016499-856	4892

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02/09/2004

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EXAMINER

LANGEL, WAYNE A

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER
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Wayne A. Langel

ART UNIT	PAPER NUMBER
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1754

DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

**OFFICE ACTION SUMMARY**

- ☒ Responsive to communication(s) filed on 12-14-03
- ☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire \_\_\_\_\_ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

- ☒ Claim(s) 1-18 and 20-22 is/are pending in the application.
- ☐ Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-18 and 20-22 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- ☐ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

-- SEE OFFICE ACTION ON THE FOLLOWING PAGES --

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The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 12-18 and 20-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Uloth et al., for the reasons given in the last Office action. Applicant's argument, that the Examiner has pointed to no technical rationale showing why the particulars of Uloth et al. would suggest the claimed oxygen consumption rate of  $1.5 \times 10^{-4}$  moles oxygen/liter/second, is not convincing. Uloth et al. teach on page 225 that the catalyst concentration of manganese oxide was 0.16 to 0.18 g/l, which is embraced by the catalyst concentration range recited in applicant's claim 1. Uloth et al. also disclose selectivity of polysulfide rates of as high as 90% in Figure 2 on page 225. Accordingly it would be expected that the consumption rate of oxygen would be at least  $1.5 \times 10^{-4}$  moles/liter/second in the process of Uloth et al. to no less extent that it would be in the process recited in applicant's claim 1. In any event, it would be prima facie obvious to carry out the process by employing a

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consumption rate of oxygen of at least  $1.5 \times 10^{-4}$  mole/liter/second, since it would be within the skill of one of ordinary skill in the art to determine a suitable or optimum oxygen consumption rate in the process. There is no evidence on record of unexpected results which would emanate from the use of a consumption rate of oxygen of at least  $1.5 \times 10^{-4}$  mole/liter/second in the process of Uloth et al., since Uloth et al. disclose selectivity of polysulfides far greater than 65%. Regarding claim 18, applicant's argument, that the art of record provides no motivation to adjust the catalyst concentration upward such that the process of Uloth et al. utilizes a transition metal oxide of 0.5 to 6.5 g/l, is not convincing. Uloth et al. disclose in the first paragraph in the middle column on page 232 that higher dosages of manganese oxide can be employed to reduce the retention time requirements. One of ordinary skill in the art would be motivated from such disclosure to increase the concentration of manganese dioxide to 0.5 to 6.5 g/l, in order to reduce the retention time requirements. There is no evidence on record of unexpected results which would emanate from the use of a manganese dioxide concentration of 0.5 to 6.5 g/l in the process of Uloth et al., since Uloth et al. disclose polysulfide selectivities of greater than 80%.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uloth et al. as applied to claim 1 above,

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and further in view of U.S. Patent 3,860,479, for the reasons given in the last Office action. Applicant's argument, that the Examiner points to no motivation as to why one skilled in the art would depart from the temperatures recited in Uloth et al. to use the wholly different temperatures of the '479 patent, is not convincing. Uloth et al. teach in the fourth full paragraph in the middle column on page 229 that the temperature at the start of a run is 88 to 90°C. There is nothing in Uloth et al. which would imply that lower temperatures could not be employed. Accordingly it would be obvious from the '479 patent to employ temperatures as low as 80° in the process of Uloth et al., since the process of the '479 patent is directed to the oxidation of sulfide in the presence of a manganese dioxide catalyst, so it would be expected that the temperatures of 50 to 90° disclosed in the '479 patent would function in the process of Uloth et al. There is no evidence on record of unexpected results which would emanate from employing a temperature of about 75 to 80°C in the process of Uloth et al.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS

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OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-0994.

WAL:cdc

January 28, 2004

*Wayne A. Langel*  
WAYNE A. LANGEL  
PRIMARY EXAMINER